

Allan Cunningham's Timor collections

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Abstract

Orchard, A.E. & Orchard, T.A. Allan Cunningham's Timor collections. *Nuytsia* 23: 63–88 (2013). The visits of Allan Cunningham to Timor in 1818 and 1819, at the conclusion of Lieutenant Philip Parker King's first and second survey voyages to the north coast of Australia, are summarised, and surviving collections held in the Natural History Museum herbarium and the herbarium, Royal Botanic Gardens, Kew are listed. The significance of the various labels found on these sheets is discussed.

Introduction

Allan Cunningham (1791–1839) is justly celebrated as one of the foremost botanists and explorers of Australia in the first third of the 19th century. His collections of seeds, bulbs and living plants sent to Kew over three decades introduced hundreds of Antipodean plants to cultivation in Europe, in the process restoring Kew to the position of leading European botanical garden, while his dried specimens were used by him, and by many other botanists, to describe a substantial part of the Australian flora. These specimens are now found in at least 26 herbaria around the world.

Not so well known is the fact that Cunningham also collected outside of Australia. On his journey from England to New South Wales he spent nearly two years (1814–1816) collecting in Brazil with another Kew botanist, James Bowie. Then, on his arrival in Sydney he was almost immediately co-opted to accompany Lieutenant Phillip Parker King on the latter's surveys of the north-east, north-west and south-west coasts of Australia between 1817 and 1822. On these voyages the surveys touched at Kupang [Coepang, Coupang], west Timor, twice (5–11 June 1818 and 1–9 November 1819), as well as at Mauritius (26 September–13 October 1821). In addition, Cunningham twice visited New Zealand (August–December 1826 and September–October 1838), and Norfolk Island (including Phillip Island) from May–September 1830. In all of these places Cunningham collected propagation material for Kew, and dried specimens and seeds for Kew and Sir Joseph Banks/Robert Brown (the latter dried collections are now in the Natural History Museum).

The present authors are in the process of compiling a detailed biography of Cunningham, which will include some details of his collections and collecting activities. As part of this research, the holdings of the Natural History Museum (BM) and Kew (K) were manually searched for surviving Cunningham specimens, and these have been matched, where possible, with Cunningham's surviving shipping lists of specimens. The shipping lists prepared by Cunningham bore only his field determinations, and are frequently obscure, with nothing to link individual entries to modern names. By working from surviving

specimens, however, it has been possible in most cases to match these lists to current names, leading to a more useful interpretation of Cunningham's explorations.

This paper on the Timor collections is the first of an intended series in which Cunningham's lists will be reinterpreted and updated, and surviving specimens in K and BM listed. In addition, the various labels appearing on these specimens will be discussed, allowing future users to interpret the often tortuous path that some specimens traced from Cunningham, through various hands, to their current lodging.

The circumstances leading to the Timor visits

The establishment of the British colony at Port Jackson is popularly believed to have been driven by the need to export a growing prison population in England far beyond the seas, to a place from which it was hoped most would never return. However, another, and perhaps more urgent reason, was to forestall the perceived threat of French (and perhaps Spanish) colonisation of the newly discovered continent. This led, in 1800, to the despatch of a survey expedition in the *Investigator*, led by Matthew Flinders, around the coasts of New Holland. Flinders' survey encompassed only the south coast, part of the east coast, and the north coast as far as eastern Arnhem Land, where, because of the poor state of the *Investigator*, he was obliged to abandon the survey, seek temporary repairs in Timor, and return to Sydney. He was accompanied on this voyage by Robert Brown, who collected intensively at all landfalls, including Timor.

The Napoleonic Wars frustrated any attempt to continue the surveys, until 1817. Lieutenant King was then charged with filling the gaps on the (English) charts, particularly in the north-west of the continent. Fortuitously, Allan Cunningham had arrived in Sydney late in 1816, as the King's Collector for Kew, and Banks arranged for him to join King's survey voyage, a circumstance that succeeded beyond anyone's imagination. Cunningham and King were of about the same age (26 and 25 respectively), and worked together well, forming a close lifelong friendship.

The first voyage (22 December 1817–29 July 1818) visited King Georges Sound, Exmouth Gulf and the Dampier Archipelago, before serious surveying began in northern Arnhem Land, picking up more or less where Flinders and Brown had left off 14 years earlier. With the turn of the season, the expedition called at Coepang, Timor, from 4–13 June 1818, to replenish supplies before returning to Sydney. Cunningham took the opportunity to collect in the vicinity of the town and along the river from 6–11 June, with the help of a Malay servant supplied by the Dutch administrator. (Figures 1–3)

The second voyage (8 May 1819–12 January 1820) surveyed the east coast of Queensland before examining the northern coast of Arnhem Land westwards from the area seen the previous year, as far as Port Warrender. Again, at the end of the survey King visited Timor (1–9 November 1819) to resupply his ship, and Cunningham was able to collect specimens and seeds in the vicinity of the town on 3–5 November. The two collections were thus complementary, being seasonally five months apart, allowing Cunningham to collect the same species at different stages of development.

Distribution of the specimens

Cunningham's employment contract with the King (George III), via Treasury, was principally framed for him to deliver a wide range of seeds, bulbs and living plants for Kew. However, Banks (who had been given oversight of Cunningham's activities) had also specified that dried specimens

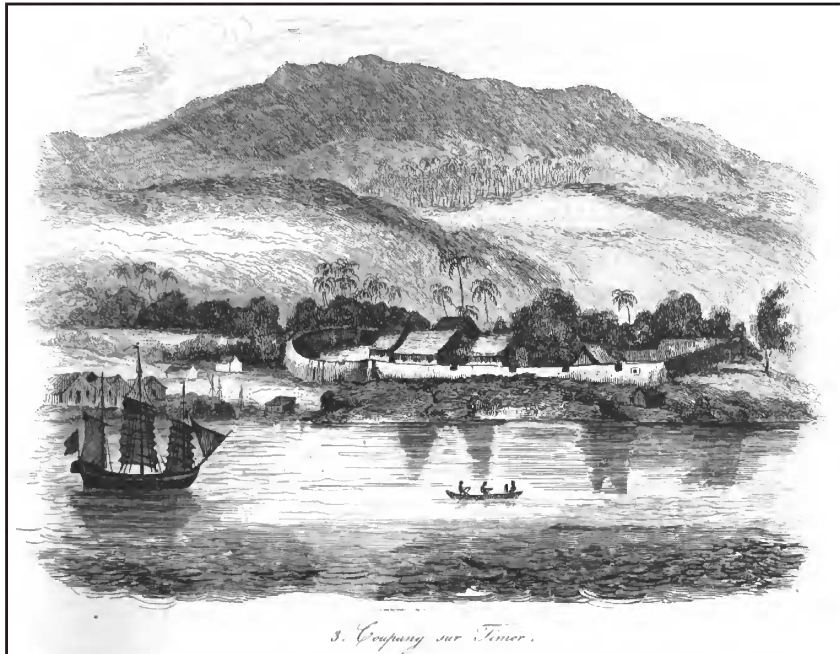


Figure 1. Coupang, the Dutch fort and village, c. 1825. Sainson engraving, from J.S.C. Dumont d'Urville, *Voyage Pittoresque Autour du Monde*, vol. 2: pl. XXVII (1839).

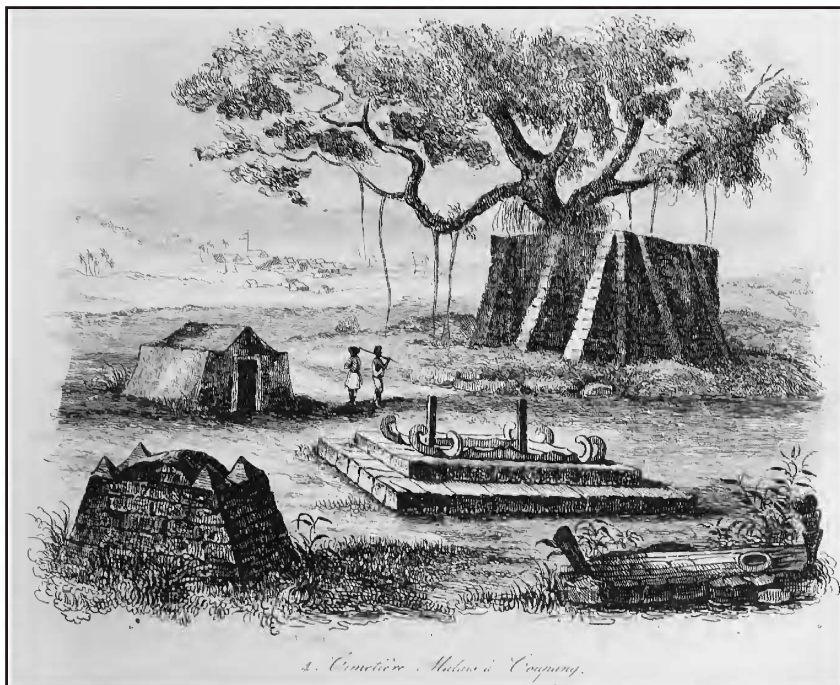


Figure 2. Coupang, the Malay Cemetery, village of Coupang in the background, c. 1825. Sainson engraving, from J.S.C. Dumont d'Urville, *Voyage Pittoresque Autour du Monde*, vol. 2: pl. XXVII (1839).



Figure 3. 'View looking up Coupang River, Island of Timor'. Print by T. Medlana, published 30 August 1806, by J. Gold, 103 Shoe Lane, later hand coloured.

should be collected wherever possible, to aid in identification of the living material sent to Kew. It must be remembered that at this time knowledge of the Australian flora was in its infancy, with only Labillardiere's *Specimen* (1804–1806) and Robert Brown's *Prodromus* (1810) generally available. Cunningham's sole reference books in Brazil had been Aiton's *Hortus Kewensis* (1810–1813) (on which he had worked himself before leaving Kew), and Persoon's *Synopsis* (1805–1807). These two books underpinned much of his early work in Australia as well. Brown had access to his own collections from Australia, and those of Banks and Solander, but both these holdings were limited in geographical scope. Cunningham had no herbarium reference materials other than his own collections.

Cunningham was therefore expected to make at least two duplicate specimens of his dried collections, one for Brown/Banks at Soho Square, the other for Aiton at Kew. Banks died on 19 June 1820, but Cunningham continued to send material to Brown, as well as to Aiton. Cunningham expected that Brown would reply to him with determinations of material received, but this in fact almost never occurred. In addition, Cunningham kept at least one additional replicate of his collections for his own reference herbarium, and if material was plentiful and in good condition, he often made additional replicates. These additional replicates were, at least in part, sent to Aiton at Kew. There Allan Cunningham's brother Richard, Aiton's amanuensis/private secretary, examined them, provided determinations, and frequently sent some to other leading botanists, most notably William Hooker, then Professor of Botany at Glasgow. It is likely that Richard Cunningham also provided Allan Cunningham with redeterminations of collections received, but this is unclear. Richard's numerous letters to his brother have mostly not survived.

At his own request, Cunningham was recalled to England in 1831, and spent almost six years in a cottage at Strand-on-the-Green near Kew, sorting through his collections, writing some of them up, and distributing them to leading botanists in the UK and Europe (particularly to de Candolle). This activity increased when in 1836 he was recalled to New South Wales as Colonial Botanist to replace his brother, killed near the Bogang River on Mitchell's 1835 expedition. However Cunningham retained

his own reference herbarium, at least, and took this with him back to New South Wales (In a letter to Lindley (Cunningham 1836) he revealed that his 'extra baggage', over and above his cabin baggage, consisted of 10 cases, presumably books and specimens.). In 1837, after less than a year as Colonial Botanist, Cunningham resigned from the post, and pursued private collecting in New South Wales and New Zealand, adding to his collections, but sending no material back to Kew or to Brown. He died in Sydney on 27 June 1839.

At a later date a set of Cunningham's specimens was also deposited with the Linnean Society of London. The timing and precise origin of this donation has not been determined. Some at least came to them via Cunningham's Executor, Robert Heward. Sometime between 1838 and 1841, Heward donated to the Linnean Society 'An extensive collection of dried plants, found in New Zealand by the late Allan Cunningham, Esq, F.L.S.' (*Transactions of the Linnean Society* 18: 726 (1841)); in 1844–1846 'Dried Specimens of Australian Myrtaceae, chiefly collected by the late Mr Allan Cunningham, F.L.S., Colonial Botanist, New South Wales.' (*Transactions of the Linnean Society* 20: 508 (1851)); and in 1848–1852 'Dried Specimens of Australian Leguminosae, including nearly 100 additional species of Acacia, collected by the late Allan Cunningham Esq., F.L.S.' (*Transactions of the Linnean Society* 21: 349 (1855)). In 1863 the Linnean Society resolved to dispose of its miscellaneous uncurated herbarium material, and it was sent for auction. However the 'arranged' Australian Herbarium was kept at this time (Linnean Society Council Minutes, 5 March 1863). Then, in 1915, the general secretary of the Society again raised the question of the Australian Herbarium, which had been put together by the Society's Librarian, Mr Richard Kippist. This collection was apparently never consulted, and lacked proper cabinet protection. It was resolved to offer the collection to Mr J.H. Maiden of Sydney, NSW, after the names had been verified under the superintendence of Dr Stapf, the Society's Botanical Secretary (1908–1916), who did so (Linnean Society Council Minutes, 6 May 1915). This material was sent to Kew for onward despatch to Sydney. From Kew acknowledgement of receipt of two cases of Australian plants was shortly afterwards received from the Director, Sir David Prain (Linnean Society Council Minutes, 3 June 1915). The war may have interrupted the planned despatch of the collection to Sydney, leading to it being broken up. The Accessions Register of the Natural History Museum has an entry for 23 October 1915 (DF413/19: 94): '163 Specimens of Australian plants from the Council of the Linnean Society, through the Director, Royal Gardens, Kew.' There was a side note: 'i.e Ranunculaceae–Rubiaceae selected from list'. Other specimens from this source are now also to be found in Kew. In both cases they bear a small printed label 'PRESENTED BY THE LINNEAN SOCIETY 1915'. A large part of this Australian Herbarium was Cunningham material, although other collectors (e.g. R.C. Gunn, A. Burnett, J.E. Ker, and others) were also represented. Some Kew collections from these other collectors (but not Cunningham) bore an alternative larger label 'HERBARIUM KEWENSIS/HERBARIUM AUSTRALIENSE./Presented by the LINNEAN SOCIETY, 1915'. At least one of these sheets did eventually make it to Australia. In CANB there is a sheet of *Stenanthera pinifolia* R.Br., collected by Stephenson (No. 5, 6) in NSW in 1844. It bears the second type of label, and seems to have come to CANB as exchange from K.

On Cunningham's death in Sydney in 1839, his possessions were returned to England by his friend and former ship commander P.P. King, and disposed of by his Executor, Robert Heward. Heward at first distributed some duplicates from the herbarium to various botanists (Lindley, Bentham, W. Hooker and others), but the majority of the surviving material was organised by him, labelled by reference to Cunningham's journals and correspondence, and then in 1862 donated *en bloc* to Kew. The total donation was of 3,827 collections (Heward 1862), including 75 specimens from Timor and Mauritius.

In the meantime, Aiton had retired from Kew in 1841. The Kew herbarium collections of Cunningham (and James Bowie) had been housed in a small shed near Aiton's office. In 1840, shortly before Aiton's

retirement, Robert Brown visited Kew and claimed these collections for the British Museum. However, Kew was not without Cunningham material for long. William Hooker took up the post of Director of Kew in 1841, bringing with him his private herbarium. In 1854 Bentham presented his herbarium of about 100,000 sheets (including some Cunningham material obtained directly from Cunningham or via Heward), to Kew, and this with other donations became the foundation of the official Kew herbarium. On the death of William Hooker in 1865, his private herbarium, which had been housed at Kew, was purchased by the state (1866), and another batch of Cunningham specimens thus became part of the Kew herbarium.

In summary, therefore, the two main recipients of Cunningham's herbarium material were what is now the Natural History Museum (BM) and Kew herbarium (K). Smaller numbers were distributed to other herbaria at various times, but do not impinge on the present discussion.

The Natural History Museum collections came from:

1. Material sent home by Cunningham during his contractual period (1814–1831) to Banks and, after his death, to Robert Brown.
2. Material sent to Aiton at Kew and housed there until 1840, when Robert Brown removed it to BM.
3. Possibly, small numbers donated by other botanists, who had received gifts from Cunningham or Heward.
4. A small number of specimens received from the Linnean Society of London.

Many Cunningham collections in BM were subsequently distributed to other herbaria, notably the Royal Botanic Gardens, Edinburgh (E), and to various Australian herbaria (particularly MEL and NSW).

The Kew collections came from:

1. The Bentham herbarium donated in 1854. Bentham had received these specimens via Richard Cunningham (before 1831), direct from Allan Cunningham (1831–1838), or from Heward after Cunningham's death.
2. The William Hooker herbarium purchased in 1866. Hooker had received these specimens while Professor of Botany at Glasgow, from Richard Cunningham (before 1831) or direct from Allan Cunningham (1831–1838).
3. The donation to Kew by Robert Heward in 1862 of specimens from Cunningham's bequest. These specimens represent Cunningham's personal herbarium, although Heward's large labels were written after Cunningham's death, and represent Heward's interpretation of provenance, taken from a (well-informed) reading of Cunningham's papers.
4. Possibly, small numbers donated by other botanists, who had received gifts from Cunningham or Heward.
5. A small number of Australian specimens received from the Linnean Society of London (but apparently not including Timor collections).

The labels on the K and BM Cunningham specimens

Cunningham's collections bear a bewildering array of labels, reflecting their passage through different hands, and can be a source of confusion. The list below reflects the kinds of labels which are found

on the collections from Timor in the two main repositories of Cunningham's collections from that island. Not all types are found on all sheets.

Natural History Museum (BM)

1. Cunningham's 'tickets'. These are Cunningham's own field labels, in his own hand, often consisting only of a number (that cited on a shipping list at the end of each expedition, in this case on his return to Sydney in 1818), or in other cases a brief note on locality, habitat or habit.
2. A small printed label stating collector, locality and date. These were produced curatorially in BM, as similar labels exist for other more or less contemporary collectors.
3. A small printed label 'Presented by the Linnean Society 1915'. Material formerly in the Linnean Society of London, and sent to BM via K.
4. Sometimes, one or more determination slips.

Royal Botanic Gardens, Kew (K)

1. Cunningham's 'tickets' as for BM.
2. Heward's handwritten label, indicating material distributed after Cunningham's death, but from his personal herbarium.
3. A printed label recording Heward's donation 'Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq., 1862'. This is sometimes altered in manuscript for extra-Australian material.
4. A printed label 'New Holland. A. Cunningham. Hooker 1835'. These date from Cunningham's period in London (1831–1836) and may mark a major donation of Cunningham material to Hooker. Cunningham distributed much of his herbarium to the botanists Lindley (Cambridge), Candolle (Geneva), Endlicher (Vienna), Schauer (Breslau), Fischer (St Petersburg), Martius (Munich), David Don, Ward and Bentham, and to some unnamed friends (Cunningham 1836) prior to his return to New South Wales.
5. A circular handstamp 'Herbarium Benthamianum 1854' indicating a specimen from Bentham's donation in that year.
6. A circular handstamp 'Herbarium Hookerianum 1867' indicating a specimen from Hooker's herbarium purchased in 1866.
7. Sometimes, one or more determination slips.

Printed Linnean Society labels have not been seen on Cunningham's Timor collections in K, although these are frequently encountered on his Australian collections.

The lists

Immediately upon his return to Sydney after the King voyages, Cunningham prepared lists of his seed and herbarium specimen collections, and sent these, with the material collected, to Aiton, with duplicate material for Banks separately packaged. Aiton (through Richard Cunningham) forwarded Banks' share to him in Soho Square immediately on arrival. The 'collecting numbers' that appear on Cunningham labels are actually these consignment list numbers, which appear to have been applied post-collection, just before despatch, as they are not always chronological. As both Banks and Aiton jealously guarded their 'rights' to Cunningham's seeds and specimens (and Cunningham was several

times admonished for not sending sufficient duplication, particularly of seed) it would be expected that material of all taxa listed in the consignment lists would be found in both K and BM. This is not so. The explanation probably lies in a combination of factors: material lost, destroyed or misfiled over the years, specimens on loan at the time we searched, material re-identified and refiled in one herbarium but not another, material that has lost its provenance labels over the years, material sent as exchange to other herbaria, etc.

Four shipping lists of Timor material have been discovered, one each of specimens from the 1818 and 1819 visits to Timor, and seed lists from 1818 and 1819. All sheets of Cunningham material from Timor found in K and BM are listed, following Cunningham's shipping list text. In those cases where no material was located, notes on the taxa searched are given. In searching for material we were guided by Cunningham's field determinations (which were surprisingly accurate at least at family level, and often to genus or even species). In addition the only complete flora of Timor, *Prodromus Florae Timorensis* by H.N. Ridley *et al.* (1885), provided a number of citations of Cunningham collections (most, unfortunately, lacking numbers), as well as a census of the main genera in the island, thus providing a starting point for manual searches.

Of taxa on the specimen lists, the majority have been found. Others probably still await rediscovery, but are of taxa quite different to those Cunningham thought he was collecting, and thus outside the scope of our search. Of the seeds, little can be said, except for those where a cross reference to a specimen was provided. The identity of the rest can mostly only be guessed at from the names listed in Ridley *et al.* (1885). Kew kept very poor records of the success or otherwise of the propagation material sent back by Cunningham. Only one Timor plant occurs among those illustrated by Bond and Duncanson (see Mabberley 2004) as new accessions to Kew: a plant identified as *Grislea* sp. (= *Woodfordia floribunda*), and described as 'Raised in 1820 from Seed collected at Timor by Mr Cunningham during the 2^d voyage of Captain King. Seed Book 4062/1820'. This is No. 521 of the 1819 specimen list, and No. 288 of the seed list.

1818 Timor specimen list

This list comes from the Cunningham Papers, vol. 2: 3/1, ff. 24–26, housed in the Botany Library, Natural History Museum, London, and thus represents the copy sent to Banks. That sent to Aiton has not survived. The list was compiled by Cunningham in Sydney immediately following the conclusion of the voyage, and the numbers 307 to 339 are despatch numbers (interpolated into a much longer list of Australian plants collected before and after the Timor interlude) assigned to the specimens at random. They are not chronological, consecutive collecting numbers. The text is given as written by Cunningham, retaining his spelling, capitalisation and sentence structure. The names therefore are Cunningham's field determinations made in Timor and on his immediate return to Sydney. Where the notes are followed by a Latin diagnosis, this usually meant that Cunningham thought he had a previously undescribed taxon. The 'author citation' H.K. is Cunningham's shorthand for 'of Hortus Kewensis'. The numbers in brackets at the end of each entry are cross-references to his Seed List, in those cases where he also collected seed for the Royal Garden at Kew.

Following each entry is an enumeration of those specimens which have been located at the Natural History Museum, London (BM), and the Herbarium, Kew (K), along with the names they now bear, and a transcription of their labels. No Timor material has been located in other herbaria, but it may exist.

307. Sapindi. Tree of moderate size 20–25 feet high, leaves pinnate, fruit in racemes. Valleys and

deep-shaded Situat[ions] June.

BM, K: Not found (searched *Atalaya*, *Harpulia*, *Allophyllus*, *Cardiospermum*, *Pometia*, *Cupania*, *Erioglossum*).

This is possibly *Schleichera oleosa* (Lour.) Oken, collected in 1819 as No. 524.

308. Zizyphus Jujube. A small Tree with spreading elongated branches, very frequent on the Sterile rocky Hills above Coepang.

BM: Not found (checked *Zizyphus*).

K: Filed as *Zizyphus jujube* Lam. Heward label 'Zizyphus jujube Lam., Coepang, Timor, A. Cunningham No. 308, June 1818', plus printed 'Allan Cunningham's Australian Collections, Presented by Robert Heward Esq., 1862', mounted with another collection by Horsfeld from Java (Herbarium Hookerianum).

309. Bignonia (cymbicarpa) or perhaps B. indica. Leaves bipinnate. A slender Tree 12–16 feet high. Sides of the Hills in rather shaded Situat^{ns}. 9 June (104).

BM: Not found (checked *Oroxylum*, *Colea*, *Dolichandrone*, indets).

K: Not found (searched *Millingtonia*, *Dolichandrone*, *Colea*).

This may be *Millingtonia hortensis* L.f., collected also as No. 321.

310. Gardenia sp. (florida H.K?) A Shrub on the Margins of Fresh Water River, & sides of the Hills in its Vicinity near Coepang. 9 June (168).

BM, K: Not found (searched *Gardenia*, *Nauclea*, *Spermacoce*).

311. Caesalpinia alata, closely allied to *C. Sappan* Roxb. but differing in having a densely villous Calyx and a few scattered hairs on its foliage. Legume wing'd, a reclining prickly Shrub. Rocky Hills (150).

BM, K: Not found (searched *Caesalpinia*).

312. Kleinhovia hospita. A large Branching Tree. Valleys & sides of Rocky Hills. June (159).

BM: Not found (searched *Kleinhovia*).

K: Filed as *Kleinhovia hospita* L. Heward label 'Kleinhovia hospita Linn., Coepang, Timor, June 1818, A. Cunningham No. 312', and printed label 'Allan Cunningham's Australian Collection. Presented by Robert Heward Esq., 1862.'

K: Second sheet filed as *Kleinhovia hospita* L. Cunningham ticket 'Kleinhovia [sic] hospita L., Coepang, Timor', and handstamp 'Herbarium Hookerianum 1867'.

313. Rubiaceae. A small Tree in fruit, bacca 1-sperma. June (165).

BM: Filed as *Xylosma luzonense* (Presl) Clos. Cunningham ticket '313', and printed label 'Coupan, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'. Det.: *Xylosma luzonense* (Presl) Clos, by Sleumer, 1954.

K: Filed as *Xylosma luzonense* (Presl) Clos. Cunningham ticket 'Rubiaceae, Coepang' plus handstamp 'Herbarium Hookerianum 1867' and Det.: *Xylosma luzonense* (Presl) Clos, H. Sleumer 11/53. Although unnumbered, this specimen is more likely to be this number than No. 530 of 1819, which Cunningham had field identified as 'Diospyros?'.

314. Hesperidea, Guttiferae, Garcinia with Polyadelphous flowers, Stamina numerous in fasciculi. Leaves of Calophyllum. a Tree of modest Size 40–50 feet, of beautiful aspect. Hills, Environs of Coepang, June, and on the sterile Shore of Port Hurd, Bathurst Island, N.Coast of Australia Lat. 11° 38' S, Long 130° 23' E. 27 May.

BM: Not found (searched *Garcinia*, *Mesua*).

K: Not found (searched *Garcinia*, *Calophyllum*, *Mesua*, *Kayea*, *Mamea*). The Bathurst Island collection was not located under Clusiaceae either, suggesting that Cunningham was mistaken in his identification of family.

315. Pentandria Amaranthoideae. A Shrubby reclining plant. Hills. June (167).

BM: Filed as *Deeringia amaranthoides* (Lamk.) Merr. Cunningham ticket '315', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid. June 1818'. Det.: *Deeringia amaranthoides* (Lamk.) Merr., A. Kanis, x.1975. (Figure 4, 5)

K: Filed as *Deeringia celosioides* R.Br. No Cunningham tickets. Printed label 'New Holland. A. Cunningham. Hooker, 1835, with mss 'Amaranthaceae, Timor Island' and handstamp 'Herbarium Benthamianum 1854', mounted with another Timor specimen ex Herb. Mus. Paris 1836.

316. Barleria Prionotes, a thorny ornamental Plant, with preceding (167).

BM: Filed as *Barleria prionitis* L. Cunningham ticket '316', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'. Mounted with a Javanese specimen of the same species (*Zollinger 626*).

K: Filed as *Barleria tinctoria* [name not traced in IPNI]. Cunningham ticket '316 1 Voy.', and printed label 'Allan Cunningham's Australian Herbarium Presented by Robert Heward Esq. 1862', plus Heward mss label 'Barleria, Coepang, Timor, June 1818, A. Cunningham 316'. Mounted on type sheet of *Barleria tinctoria* with a specimen ex Herb. Paris, Timor (without collector or date) 'Recd 12/78'.

317. Phyllanthoides, baccate Shrub with elliptical obtuse alternate leaves & flowers in axillary clusters. Hills above the Town, June (157).

BM: Filed as *Phyllanthus* sp. indet. Cunningham ticket '317', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'. Det.: H.-J. Esser, May 2001 as *Phyllanthus*. This specimen was listed by Ridley *et al.* (1885) as *Breynia cernua*, but was excluded from *Breynia* by Esser.

K: Not found (searched *Phyllanthus*, *Breynia*).

318. Cassia Sp. foliis multijuga, foliolis ovato-oblongis, obtusis apice mucronatis, petiolis eglandulosis ramulisque fusco-tomentosis, racemis axillaribus terminalibus. A Slender Shrub 8 feet high. Sides of the Hills. In Thickets and dense Brushland. June.

BM: A group of 4 pods (mounted on a sheet with some Phillipines material collected by Reillo, 1912), of *Cassia timoriensis* DC., with a Heward label 'Cassia timoriensis, D.C. Coepang, Timor, June 1818, A. Cunningham. Presl. by R. Heward, Esq., F.L.S.' and a printed label 'Presented by the Linnean Society, 1915'. (Figure 6)

K: Filed as *Cassia timoriensis* DC. Cunningham ticket '318, 1 Voy.', plus Heward label 'Cassia Timoriensis Dec. Coepang, Timor, June 1818, A. Cunningham 318', and printed label 'Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq. 1862'.

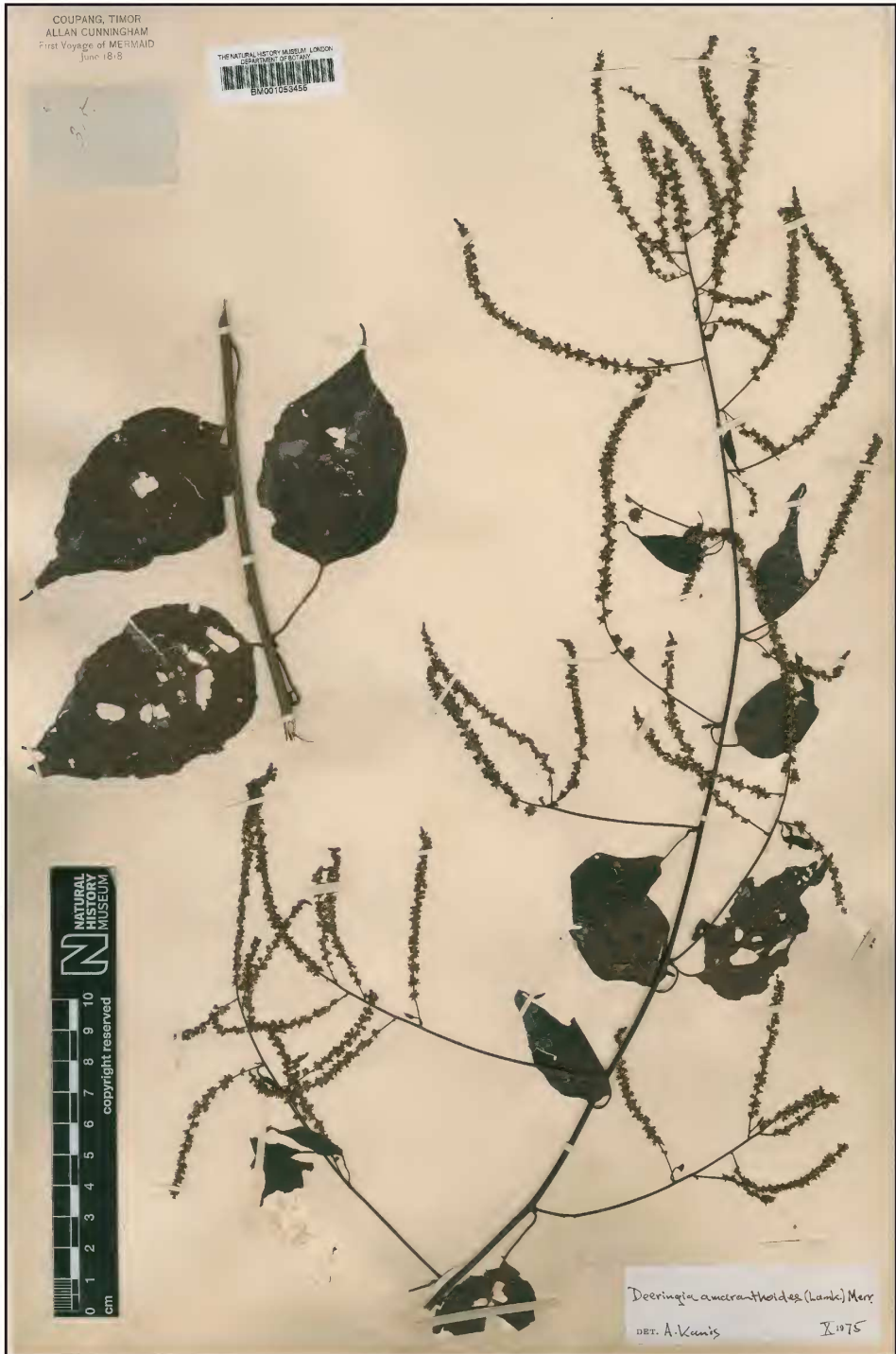


Figure 4. *Deeringia* specimen (No. 315) from Timor, 1818 (BM).

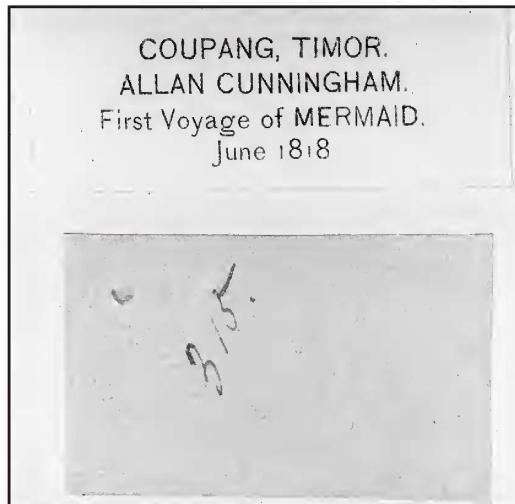


Figure 5. *Deeringia* specimen (No. 315) details of labels: printed BM label and Cunningham original '315' ticket (BM).

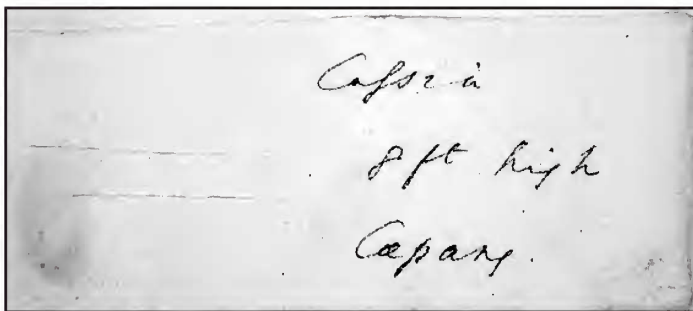


Figure 6. *Cassia timoriensis* sheet (No. 318), 1818, detail of label in Cunningham's writing (K).

K: Second sheet (leaves, flowers, young pods), filed under *Cassia timoriensis* DC. Cunningham ticket 'Cassia, 8 ft high, Coepang', and 'Herbarium Hookerianum 1867' handstamp.

319. *Loranthus* sp. pedunculis ternis geminina 3-partitis, floribus 4–5 andris, foliis ellipticis-oblongis. Parasitical on a *Ficus*. June 9.

BM: Filed as *Scurrula obovata* (Bl.) G.Don. Cunningham ticket '319', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'. Det.: *Scurrula obovata* (Bl.) G.Don by Danser, 1930.

K: Filed as *Scurrula obovata* (Bl.) G.Don. Cunningham ticket 'Loranthus, parasit. on *Ficus*, Timor.', handstamp 'Herbarium Hookerianum 1867', and Det.: *Scurrula obovata* (Bl.) G.Don by Danser, 1930.

K: Second sheet filed as *Scurrula obovata* (Bl.) G.Don. Printed label 'New Holland, A. Cunningham, Hooker 1835' with added ms 'Loranthus parasitic on *Ficus*, Timor Island' in an unknown hand, plus handstamp 'Herbarium Benthamianum 1854', and Det.: *Scurrula obovata* (Bl.) G.Don by Danser, 1930.

K: Third sheet filed as *Scurrula obovata* (Bl.) G.Don. Cunningham ticket 'Loranthus, parasit. on *Ficus*, Timor', Heward label 'Loranthus (on *Ficus*), Timor, June 1818, A. Cunningham No. 319', plus

printed 'Allan Cunningham's Australian Herbarium. Presented by Robert Heward Esq., 1862' and Det.: *Scurrula obovata* (Bl.) G.Don by Danser, 1930.

320. *Nepeta* sp. A Shrub of slender growth. Higher range of Barren Hills above Coepang. 9 June.

BM: Filed as *Sautiera decaisnii* Nees. Cunningham ticket '320', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'.

K: Not found in (searched *Sautiera*).

321. *Bignonia* sp. Foliis decompositis pinnatis foliolis ovatis acutis obliquis corymbis terminalibus. Strong volubilous plant. Hollow shaded damp Sitns, lands near Paddy Grounds &c, 9 June.

BM: Filed as *Millingtonia hortensis* L.f. Cunningham ticket '321', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'.

K: Filed as *Millingtonia hortensis* L. Cunningham ticket 'Bignonia, Coepang, Timor' and handstamp 'Herbarium Hookerianum 1867'.

322. *Acacia* sp. Leaves bipinnate branches aculeated, aculiae geminate, capitulum axillary, legumen round and same high. A Divaricate irregular rigid Shrub. Barren Rocky Hills. 9 June.

BM: Not found (searched *Acacia*).

K: Filed as *Acacia farnesiana* Willd. One sheet with two specimens, probably both from the same collection: Specimen A: Cunningham ticket '322, 1 Voy.', plus Heward label '236. Acacia Farnesiana Willd., Coepang, Timor, June 1818, A. Cunningham 322', and printed label 'Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq. 1862'; Specimen B: Cunningham ticket 'Acacia, Coepang, Timor', and Herbarium Hookerianum 1867 handstamp. Det.: *Acacia farnesiana* (L.) Willd. by I. Nielsen, x.1982. (Figures 7–9)

323. *Capparis* sp. A shrub of low Stature. Roadsides. Old Walls. In barren rocky places in the Town of Coepang. June.

BM: Not found (searched whole family).

K: Filed as *Capparis spinosa* var. *mariana* (Jacq.) K.Schum. Cunningham ticket 'Capparis, Road sides, Old Walls, Coepang, Timor', plus Heward label 'Capparis, Coepang, Timor, A. Cunningham No. 323, June 1818.' and printed label 'Allan Cunningham's Australian Herbarium. Presented by Robert Heward Esq. 1862.' Mounted with a Riedel collection from the Malay Archipelago.

324. *Banisteria timorensis, nova* sp. Foliis cordatis acutis subtus glaucis, petiolis biglandulosis, umbellis axillaribus caule volubile. A twining plant. Hills about Coepang. 9 June. (150).

BM: Not found (checked *Ryssopterys, Hiptage*).

K: Not found (searched *Ryssopterys, Hiptage, Banisteriopsis*).

325. *Buttneriaceae* [= *Byttneriaceae*]. Pentandria Pentag. Cal. 5-fidus campanulatiis. Cor. 5-petala. Caps. 5 angularis. A Shrub 5–10 feet high, allied to *Commersonia*. Sides of the Hills above the Town. 9 June.

BM: Not found (checked *Byttneria, Abroma, Melochia, Melhania, Grewia, Leptonychia, Commersonia, Asystasia, Andrographis, Waltheria*).

K: Not found (checked *Byttneria, Abroma, Melochia, Melhania, Commersonia*).



Figure 7. *Acacia farnesiana* sheet (No. 322), containing both a specimen ex Herbarium Hooker (lower) and the same ex Robert Heward (upper) (K).

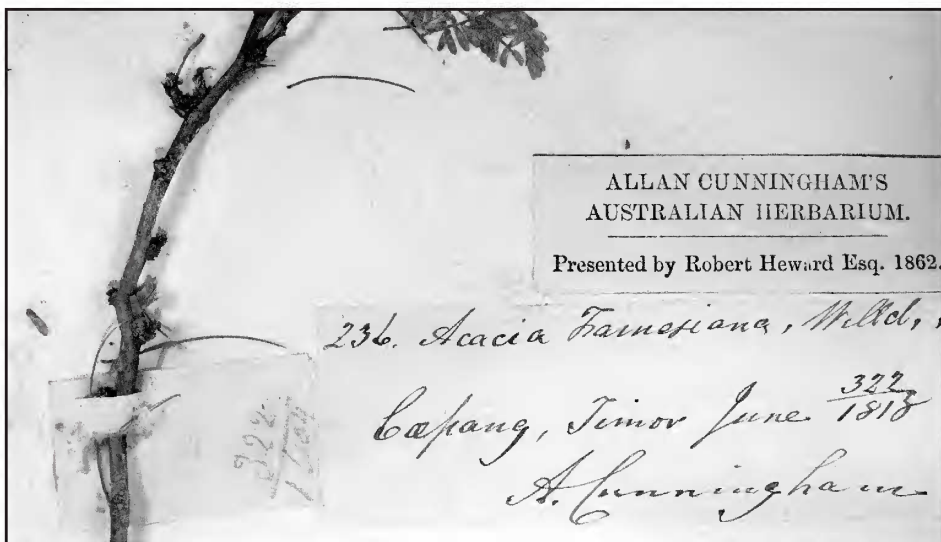


Figure 8. *Acacia farnesiana* specimen (No. 322), ex Heward, details of labels: printed Kew label; handwritten label by Heward (lower right); and original Cunningham '322 1st Voy.' ticket (K).



Figure 9. *Acacia farnesiana* specimen (No. 322), detail of Hooker herbarium circular stamp, and original Cunningham label (K).

326. *Helicteres Isora* – specimen in fruit, with preceding, 9 June (170).

BM: Not found (checked *Helicteres*).

K: Filed as *Helicteres isora* L. Heward label ‘*Helicteres Isora* Linn., Coepang, Timor, June 1818, A. Cunningham No. 326.’, and printed label ‘Allan Cunningham’s Australian Herbarium. Presented by Robert Heward Esq., 1862.’

327. Malvaceae. Caps. 3 locularis, sem. sericeus. Very frequent on the Hills in dry rocky situations. June.

BM: Filed as *Hibiscus* ‘near *micranthus*’. Cunningham ticket ‘327’, and printed label ‘Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818’.

K: Filed as *Hibiscus hirtus* L. Cunningham ticket ‘327, 1 Voy.’ plus Heward label ‘Coepang, Timor, A. Cunningham No. 327, June 1818’ and printed label ‘Allan Cunningham’s Herbarium, Presented by Robert Heward Esq. 1862’;

K: Second sheet, probably from same collection, filed as *Hibiscus hirtus*. Cunningham ticket ‘*Sida*, Malvaceae, Hills, Coepang, Timor’, plus ‘Herbarium Hookerianum 1867’ handstamp.

328. *Jasminum hirsutum* H.K. A twiggy round bushy plant. 7 June.

BM: Filed as *Jasminum pubescens* Willd. Cunningham ticket ‘328’, and printed label ‘Coupang Timor, Allan Cunningham, First Voyage of Mermaid, June 1818’.

K: Filed as *Jasminum multiflorum* (Burm.f.) Andrews. Cunningham tickets ‘328, *Jasm. hirsutum*, Coepang, Timor’, and ‘328 / 1 Voyage’, plus Heward label ‘*Jasminum pubescens* Willd. Coepang, Timor, June 1818, A. Cunningham 328’, printed ‘Allan Cunningham’s Australian Collections, Presented by Robert Heward Esq., 1862’, and ‘Herbarium Hookerianum 1867’ handstamp.

329. *Smilax* sp. A climbing shrub among Brushwood, (aculeated) Lower Hills. 9 June (174).

BM: Filed as *Smilax* sp. indet. Cunningham ticket ‘329’, and printed label ‘Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818’.

K: Filed as *Smilax* sp. Cunningham ticket ‘*Smilax* sp., Coepang, Timor’ and handstamp ‘Herbarium Hookerianum 1867’, plus Det.: ‘*Prope Sm. bracteatum* Presl. An eadem? Non *S. timorensis* Blume ined. eujus vidi spec. in h. *Horsfeld* Mus. Par. Bl. visi. A.DC.’

330. *Sida* sp. Foliis subrotundo-cordatis in aequaliter dentatis acuminatis floribus paniculatis capsulis aristatis pedunculis multifloris caule fruticoso. Hills above the Town. June. (153).

BM: Filed as *Abutilon auritum* Don. Cunningham ticket ‘330’ plus mss A. Cunningham, Timor in unknown hand. Mounted with a C.W. Andrews collection from Christmas Island.

K: Filed as *Abutilon indicum* (L.) Sweet. Cunningham ticket ‘330, 1 Voy.’, plus Heward label ‘(*Sida*), Coepang, Timor, June 1818, A. Cunningham No. 330.’, printed label ‘Allan Cunningham’s Australian Herbarium. Presented by Robert Heward Esq., 1862.’, and Det.: *Abutilon indicum* (L.) Sweet prob. var. *australiensis* Hochr. by I. van Borssum Waakes, iii.1954.

331. *Dioecia*. Tree about 20 feet high, flowers in Terminal crowded corymbs, leaves large & angular. Habit of Aleurites. Rocky Hills. June.

BM, K: Not found. Possibly Euphorbiaceae?

332. *Echites* sp. Follicle fusiform, allied to *E. costata*. A strong irregular Shrub in low humid Sitns margins of Paddy Gardens. June 1818.

BM: Filed as *Anodendron paniculatum* A.DC. Cunningham ticket '332', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'. Det.: *Anodendron paniculatum* A.DC., by D. Middleton, 1994.

K: Not found (searched *Anodendron*).

333. *Casearia* sp. Flowers axillary [?]decussate], leaves attenuated alternate, entire, margin undulated. A reclining arbuscula overhanging Paths & roadsides near Coepang. June.

BM, K: Not found (searched *Casearia*).

334. *Nerium* sp. or *Wrightia*. Follicles long united at the Base. Seeds compressed comose at their extremity. June A Small Tree 12–14 feet high. Shaded damp Situation. June.

BM: Filed as *Alstonia spectabilis* R.Br. Cunningham ticket '334', and printed label 'Coupang, Timor, Allan Cunningham, First Voyage of Mermaid, June 1818'. Det.: *Alstonia spectabilis* R.Br., by J. Monachino, 1947.

K: Filed as *Alstonia spectabilis* R.Br. Manuscript 'Timor, A. Cunningham' in an unknown hand, handstamp 'Herbarium Hookerianum, 1867', and Dets.: *Alstonia spectabilis* R.Br. by J. Monachino 1947 & K. Sidiyasa, 1996.

K: Second sheet filed as *Alstonia spectabilis* R.Br. Cunningham tickets '334, 1 Voy.' & 'Wrightia, Coepang, Timor', Heward label 'Wrightia pubescens? Coepang, Timor, June 1818, A. Cunningham 334', plus printed labels 'Allan Cunningham's Australian Herbarium Presented by Robert Heward Esq. 1862' and 'Flora Australiensis Named by Mr Bentham', handstamp 'Herbarium Hookerianum 1867' and Det.: *Alstonia spectabilis* R.Br. by J. Monachino 1947. Two pods and one branched twig on the sheet are marked as the elements received via Hooker, the balance apparently received directly by Kew from Heward.

335. *Varronia* sp. An ornamental small Tree. Rocky Hills. June.

BM: Not found (searched *Cordia*).

K: Filed as *Cordia subpubescens* Decne. Cunningham ticket 'Cordia, Timor N.W.C.' and handstamp 'Herbarium Hookerianum 1867'. This seems to be a separate collection, but undated, of the same species collected as No. 519 on the 2nd Voyage (1819).

336. *Myrtaceae*. A tree of large Dimension, flowers axillary involucreted, leaves alternate. Rocky Shaded Moist places. Margins of Fr. Water River. June.

BM: Not found (searched *Eugenia*, *Acmena*, *Psidium*, *Decaspermum*, *Syzygium obovatum*, *S. timorianum*).

K: Not found (searched *Eugenia*, *Acmena*, *Psidium*, *Decaspermum*, *Syzygium*).

337. *Flemingia strobilifera*. A Shrub in dark shaded humid Woods on the elevated Grounds between the Hills. June.

BM: Not found (checked *Flemingia*, *Desmodium*, *Indigofera*, *Zornia*).

K: Filed as *Flemingia strobilifera* Ait. Heward label 'Flemingia strobilifera Ait., Coepang, Timor,

June 1818, A. Cunningham 337', plus printed label 'With Allan Cunningham's Herbarium, Presented by Robert Heward Esq. 1862'.

K: Second sheet filed as *Flemingia strobilifera* Ait. Cunningham ticket 'Flemingia strobilifera, Timor', with 'Herbarium Hookerianum 1867' handstamp. (Figure 10)

338. Aspidium sp. A Fern with the preceding. June.

BM: Not found.

K (549139): Filed as *Amphineuron opulentum* (Kaulf.) Holttum. 'Coepang, Timor. Herbarium Hookerianum 1867'. Det.: R.E. Holttum 1976.

K (539615): Second sheet, filed as *Amphineuron opulentum* (Kaulf.) Holttum. 'A. Cunningham 338, June 1818, Coepang, Timor'. Det.: R.E. Holttum 1976.

Note: neither of these sheets was located during our search, but they have subsequently appeared on the Kew website (without images). Full details of label type are not available.

339. Pteris sp. Frond pinnate lanceolate. Slender Fern on rocks in the Bed of Fresh Water River. Coepang, 9 June.

BM, K: Not found.

1818 Timor seed list

From the Cunningham Papers vol. 2: 3/2 f. 11 & 3/3 ff. 5–6, housed in the Botany Library, Natural History Museum, London. The numbers on the right are cross references to the specimen list.

Island of Timor, Environs of Coepang

Lat. 10° 08' 30" S & Long. 123° 35' 46" E

- | | |
|---|-----|
| 150. Caesalpinia alata | 311 |
| 151. Convolvulus sp. leaves small, lanceolate, cordate | |
| 152. Clitoria sp., leaves ternate, ovate, veined, volubilous | |
| 153. Sida sp., Hills above Coepang [= <i>Abutilon</i> sp.] | 330 |
| 154. Kleinhovia Hospita, Valleys & sides of the Hills [= <i>Kleinhovia hospita</i> L.] | 312 |
| 155. Stizolobium pruriens, a twining plant, with a legume densely covered with most painful urent setae | |
| 156. Banisteria timorensis, a twining plant..... | 324 |
| 157. Phyllanthoides baccata. A shrub frequent on the rocky Hills, flowers inaxillary clusters [= <i>Phyllanthus</i> sp.]..... | 317 |
| 158. Diadelphia Psoralioides. Legumen 1-spermum, folia terna | |
| 159. Cytisus Cajan? plant dead | |
| 160. Cassia sp., foliis multijugis, in Thickets & Dense brushwood [= <i>Cassia timorensis</i> DC.]..... | 318 |
| 161. Cardiospermum Halicacabum | |
| 162. Strychnos nux vomica? | |
| 163. Cassia sp., arbuscula scandens, foliis pinnatis ternatisve | |
| 164. Bignonia sp. (cymbicarpa) or perhaps B. indica Willd. [?= <i>Millingtonia hortensis</i> L.f.]..... | 309 |

165. Rubiaceae, Bacca 1-sperma, supera, a small Tree [= <i>Xylosma luzonense</i> (Presl) Clos].....	313
166. Zizyphus Jujube [= <i>Zizyphus jujube</i> Lam.].....	308
167. Barleria Prionotis [= <i>Barleria</i> sp.].....	316
168. Gardenia (florida?).....	310
169. Celosia (argentea)	
170. Helicteres Isora [= <i>Helicteres isora</i> L.].....	326
171. Erythrina indica, a deciduous Tree abund ^l about the Environs of Coepang	
172. Cucurbitaceae. Cucurbita sp.	
173. Convolvulus sp. floral bractaeae involucriform	
174. Smilax sp., a Scandent aculeated shrub	
175. Carobinea sp. Arbor grandis, foliis septimis, fructus 2-valvis, obovatis, polyspermis. N.B. The capsules when ripe are bright red Colour, & contain 8 seeds which when divested of their arillae are esculent but oily.	
176. Solanum sp.. Orange berries, aculeated	
177. Mimosa. Acacia sp, Legumen cylindrical. Inga? A Thorny Shrub with bipinnate leaves [= <i>Vachellia farnesiana</i> (L.) Wight & Arn.].....	322
178. Cucurbitaceae. Cucumis sp., fruit ovate	
179. Cathartocarpus sp. A Slender Tree in fruit, Legumen cylindrical, 12–16 feet high. Ranges of Hills above Coepang.	

1819 Timor specimen list

From the Cunningham Papers vol. 2: 5/1 ff. 36, 37, housed in the Botany Library, Natural History Museum. Conventions are as in the 1818 list. The names are Cunningham's field determinations made in Timor and on his immediate return to Sydney. The numbers in brackets at the end of each entry are cross-references to his seed list, in those cases where he also collected seed for the Royal Garden at Kew. Following each entry is an enumeration of those specimens which have been located at the Natural History Museum, London (BM), and the Herbarium, Kew (K), along with the names they now bear and a transcription of their labels. No Timor material has been located in other herbaria, but it may exist.

513. Hypoestes sp. – Justicia allied to bivalvis – imperfect Specm. Dry Rocky Hills, Novr.

BM: Not found (checked *Dicliptera*, *Strobilanthes*, *Hypoestes*, *Justicia*, *Ruellia*, *Dipteracanthos*).

K: Filed as *Dicliptera armata* F.Muell. Cunningham tickets '513, 2 V.' and 'Hypoestes. Timor' plus Heward label 'Dicliptera glabra Decaisne, Coepang, Timor, A. Cunningham 513, 1819', plus printed label 'Allan Cunningham's Australian Herbarium. Presented by Robert Heward Esq. 1862.' Dets.: *Dicliptera glabra* Decaisne, by C.B. Clarke, 8 July 1905 and *Dicliptera armata* F.Muell., by K. Ballenall, 08/07/1993.

514. Rubiaceae. Mussaenda sp. frondosa. A rigid stiff plant on the Hills (283).

BM: Filed as *Canthopsis pubiflora* Miq. at. Cunningham ticket '514', and printed label 'Couping, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1–9, 1819'.

K: Filed as *Catunaregam* sp. [?pubiflora]. Cunningham ticket 'Mussaenda frondosa, Timor', plus handstamp 'Herbarium Hookerianum 1867'.



Figure 10. *Flemingia strobilifera* specimen (No. 337), 1818, ex Herbarium Hooker (K).

515. *Cynanchum* sp. caule volubilis fruticosa, foliis cordata apice attenuatis, obtusis, Umbellis congestis pedunculatis. In thickets on the Hills.

BM: Filed as *Tylophora* sp. indet. Cunningham ticket '515', and printed label 'Coupang, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1–9, 1819'. Also an unsigned drawing of a dissection of the flower, and notes.

K: Not found (searched *Tylophora*, *Cynanchium*, *Marsdenia*, *Periploca*).

516. *Periploca mauritiana*? A volubilous shrub, with preceeding.

BM: Not found (searched *Marsdenia*, *Hoya*, *Discidia*, *Gymnema*, *Dregea*, *Cryptolepis*, *Pergularia*, *Periploca*, *Secamone*, *Calotropis*, *Ceropegia*).

K: Not found (searched *Tylophora*, *Cynanchium*, *Marsdenia*, *Periploca*).

517. *Carissa* sp., distinct from *spinosum*, vide Rumph. amb. Hills.

BM, K: Not found (searched *Carissa*).

518. *Tabernaemontana coronaria* viz. in H.K. an ornamental Shrub on the Hills.

BM: Filed as *Tabernaemontana pandacaqui* Lam. Cunningham ticket '518', and printed label 'Coupang, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1–9, 1819'. Det.: *Ervatania decaisnei* A.DC., conforms to Paris type, Boiteau, 1976; *Tabernaemontana pandacaqui* Lam., A.J.M. Leeuwenberg 1988.

K: Not found (searched *Tabernaemontana*).

519. *Cordia* sp. allied to *monoica* Roxb. Freqt on the Hills. (284).

BM: Filed as *Cordia subpubescens* Decne. Cunningham ticket '519', and printed label 'Coupang, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1–9, 1819.'

K: Filed as *Cordia subpubescens* in Type folder for *C. subpubescens*. Cunningham ticket '519/2', with Heward label 'Coepang, Timor, A. Cunningham No. 519, Nov. 1819', and printed label 'Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq., 1862', and 'Herbarium Hookerianum 1867' handstamp. Mounted with a second Timor collection, without collector, ex Herb. Paris 1836, ex Herb. Bentham 1854.

K: Filed in Type folder of *Cordia subpubescens*, Timor, without collector, ex Herb. Paris, recd 12/78.

K: Filed as *Cordia subpubescens*. Cunningham ticket 'Cordia, Timor', with 'Herbarium Hookerianum 1867' handstamp.

520. *Vitis* sp., a large scandent plant at this period without leaves, shaded thickets.

BM: Not found (checked *Leea*, *Cissus*, *Vitis*).

K: Not found (checked *Leea*, *Cissus*, *Vitis*, *Cayratia*, *Parthenocissus*, *Ampellocissus*, *Nothocissus*, *Pterisanthes*, *Tetrastigma*, Vitaceae indet.).

521. *Grislea tomentosa* Roxb. a large twiggy Shrub, Rocky Hills.

BM: Filed as *Woodfordia floribunda* Salisb. Typed label 'Timor, 1819, Allan Cunningham 521'.

BM: Second sheet filed as *Woodfordia floribunda*, bearing just Cunningham's ticket '521', and pencilled annotation 'Timor. Allan Cunningham, 1819, *Grislea tomentosa* Roxb.'

K: Not found (searched *Woodfordia*).

522. *Amyris* sp. *aculeata*, foliis ternatis, foliolis ellipticis, undulatis, integerrima apice attenuatis subtus petiolis ramulisque tomentosis, racemis axillaribus folio brevioribus. A shrub frequent on the Hills. Novr. (289). [The Latin diagnosis indicates that Cunningham thought that this was a previously undescribed species].

BM: Not found (checked *Zanthoxylon*, *Euodia*, *Micromelum*, *Triphasia*, *Glycosmis*, *Murraya* (*Chalcas*), *Clausena*, *Citrus*).

K: Not found (checked *Zanthoxylon*, *Euodia*, *Micromelum*, *Citrus*, *Triphasia*, *Glycosmis*, *Murraya*, *Clausena*).

523. *Amyris* sp. allied to *A. dentata* Willd – villosa, foliis pinnatis foliolis ovato-lanceolatis serratis, apice attenuatis integris, racemis axillaribus elongatis. A shrub, among Brushwood, on the Hills.

BM, K: Not found (as above). It seems likely that Nos 522 and 523 were misidentified by Cunningham as to family.

524. *Mimusops* sp. *Achras* – Bacca 1–2 sperma (What is *Achras dissecta* Forst.?) A Tree 20 feet of branching habit. Hills above Coepang.

BM: Filed as *Schleichera oleosa* (Lour.) Oken. Cunningham ticket '524' and mss 'Timor, A. Cunningham, 1819' in an unknown hand. Det.: *Schleichera oleosa* (Lour.) Oken by P.W. Leenhouts, 1969.

K: Filed as *Schleichera oleosa* (Lour.) Oken. Heward label 'Hills above Coepang, Timor, Novr 1819, A. Cunningham No. 524' plus printed label 'Allan Cunningham's ~~Australian~~ Herbarium. Presented by Robert Heward Esq., 1862', and Det.: *Schleichera oleosa* (Lour.) Oken by P.W. Leenhouts, 1969.

K: Second sheet filed as *Schleichera oleosa* (Lour.) Oken. Cunningham ticket 'Mimusops or Achras, Timor', plus Det.: *Schleichera oleosa* (Lour.) Oken by P.W. Leenhouts, 1969.

525. *Lawsonia spinosa* Linn. a var. of *inermis* vide Desfont. atlant. p. 325, with the preceding (290).

BM: Not found (checked *Lawsonia*).

K: Filed as *Lawsonia spinosa* L. Cunningham ticket 'Lawsonia spinosa, Timor' in Cunningham's hand.

526. *Vitex latifolia* lamareck. A Tree 25 feet high, of branching ornamental regular Habit. Hill above the Town. (297).

BM (757587): Filed as *Vitex parviflora* A.Juss. Typed label 'Coupang, November 1–9, 1819, Coll. A. Cunningham No. 526, 2nd. Voyage of 'Mermaid''. Det.: *Vitex parviflora* A.Juss. by R.P.J. de Kok, 2003.

BM (757588): Second sheet filed as *Vitex parviflora* A.Juss. Cunningham ticket '526', printed label 'Coupang, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1–9, 1819', and Det.: *Vitex parviflora* A.Juss., by R.P.G. de Kok, 2003.

K (698692): Filed as *Vitex parviflora* A.Juss. Cunningham ticket 'Vitex latifolia, Timor'. 'Herbarium Hookerianum 1867' handstamp. Det.: *Vitex parviflora* A.Juss. by R.P.J. de Kok, 2003.

527. *Ruellia* sp. *humifusa*, villosa fruticosa, foliis ovatis acutis, sessilibus nervosis capitulis terminalibus involucratis laniginosis. A Shrubby plant growing in Tufts, observed frequent in the Rice grounds, occasionally inundated. Vic^y of Coepang.

BM: Filed as *Lepidagathis humifusa* Decne. Cunningham ticket '527', plus printed label 'Coupang, Timor. Allan Cunningham. Second Voyage of Mermaid, Nov. 1–9, 1819'.

K: Filed as *Lepidagathis humifusa* Decne. Cunningham ticket 'Ruellia humifusa, Timor', plus Heward label 'Lepidagathis Decaisne (Ruellia) humifusa A.C. Mss, Coepang, Timor, A. Cunningham 527, Nov. 1819', and printed label 'Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq. 1862'. Second label with '527/1819, Timor' in Cunningham's hand, plus 'Ruellia sp. humifusa' in another hand. Handstamp 'Herbarium Hookerianum 1867'. Det.: *Lepidagathis humifusa* Decaisne by C.B. Clarke, 8 May 1905.

528. *Sterculia* sp. allied to *S. macrophylla* of Vent. A Tree of low stature, but robust & stately growth. Barren Hills (304).

BM: Filed as *Sterculia* sp. indet. Manuscript 'Insula Timor, prope Coepang, Cunningham in King's 3rd Voyage, No. 528' on reverse.

BM: Second sheet filed as *Sterculia populifolia* DC. Handwritten label (unknown hand, possibly Richard Cunningham) 'Sterculia populifolia De Cand. prodr. exclus. syn Roxb. Timor, Allan Cunningham, cfr. St. 4fidum et urceolatam'.

K: Filed as *Sterculia populifolia* DC. Cunningham ticket '528/2nd Voy.', plus Heward label 'Sterculia, Coepang, Timor, A. Cunningham No. 528, Nov. 1819', and printed label 'With Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq., 1862'. Det.: *Sterculia ceramica* R.Br. by W. Soegeng Riksodihargo, 1964 & for *Sterculia populifolia* DC. by I.G.M. Tantra, 26/8/1975.

529. *Croton* sp., scabra tomentosa foliis subrotunda cordatis acutis nervosis, subcrenolato-undulata glandulosis, racemis elongatis axillaribus terminalibus. To be examined with the Linnean *C. moluccanum* (an Aleurites). Shrub on the Hills. [The Latin diagnosis indicates that Cunningham thought that this was a previously undescribed species].

BM: Filed as *Mallotus papillaris* (Blanco) Merr. Cunningham ticket '529' and printed label 'Coupang, Timor. Allan Cunningham. Second Voyage of Mermaid, Nov. 1–9, 1819'. Det.: *Mallotus papillaris* (Blanco) Merr. by Soraya Sierra, 14 April 2005.

K: Filed as *Mallotus papillaris* (Blanco) Merr. Cunningham ticket '529, 2', plus Heward label 'Croton, Timor, A. Cunningham No. 529, Nov' 1819' and printed label 'Allan Cunningham's Australian Herbarium, Presented by Robert Heward Esq, 1862'. Det.: *Mallotus papillaris* (Blanco) Merr. by Soraya Sierra, 14 April 2005.

K: Second sheet filed as *Mallotus papillaris* (Blanco) Merr.. Cunningham ticket 'Croton, Timor', and handstamp 'Herbarium Hookerianum 1867'. Det.: *Mallotus papillaris* (Blanco) Merr. by Soraya Sierra, 14 April 2005.

530. Ebenaceae? *Diospyros*? *glabra*, foliis elliptico-ovatis attenuatis, undulato-repandis, axillis foliorum spinosis, racemis axillaribus congestis. Rocky Hills in the Vicinity.

BM: Filed as *Xylosma luzonense* (Presl) Clos. Cunningham ticket '530', and printed label 'Coupang, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1–9, 1819'. Det.: *Xylosma*, by Merrie, 1935 and *Xylosma luzonense* (Presl) Clos, by H. Sleumer, 11/1953. Probably a second (re-)collection of No. 313 (1818).

K: Filed as *Xylosma luzonense* (Presl) Clos. Cunningham ticket '530, 2d', plus Heward label 'Coepang, Timor, A. Cunningham No. 530, Nov. 1819, Pres^d by Mr Heward 1862', and a Det.: *Xylosma luzonense* (Presl) Clos, H. Sleumer 11/1953.

K: Second specimen filed as *Xylosma luzonense* (Presl) Clos. Cunningham ticket 'Ebenaceae, Timor', plus handstamp 'Herbarium Hookerianum 1867', and Det.: *Xylosma luzonense* (Presl) Clos, H. Sleumer, 11/1953.

531. Ficus sp. nearly related to *benjamina* & *comosa* of Roxb. A large Tree, having the stem densely matted with the roots that proceed as well from the branches as from the Trunk itself. These roots descend & on reaching the Ground, penetrate immediately beneath the Surface. Woods in Vicinity Margins of flats converted in Rice Grounds. Nov. 1819.

BM: Filed as *Ficus lacor* Ham. Cunningham ticket '531', and printed label 'Coupang, Timor, Allan Cunningham, Second Voyage of Mermaid, Nov. 1-9, 1819'. Det.: *Ficus lacor* Ham., E.J.H. Corner, 2/1986.

K: Filed as *Ficus virens* Ait. Cunningham ticket 'Ficus, Timor' with a triangle enclosing a small circle, and handstamp 'Herbarium Hookerianum 1867'. Also a label 'Urostigma ? timorensis Miq.' and a similar handstamp, plus Det.: *Ficus virens* Ait., E.J.H. Corner, x/1958.

1819 Timor Seed List

The numbers in this list continue from those of the north-west coast of Australia visited by King and Cunningham immediately beforehand, and are followed by seeds from the vicinity of Sydney, collected at the conclusion of the voyage. The numbers on the right are cross references to the specimen list.

Specm List

280. *Jasminum pubescens* [possibly *Jasminum multiflorum* (Burm.f.) Andrews]
 281. *Convolvulus* sp. (plant dead)
 282. *Solanum* sp. aculeated Shrub, fruit large yellow. [possibly *S. ferox* L. or *S. lasiocarpum* Dunal]
 283. *Mussaenda frondosa* [?= *Catunaregam* sp.] 514
 284. *Cordia monoica?* Roxb. [= *Cordia subpubescens* Dcne] 519
 285. *Zizyphus Jujube* [probably *Zizyphus jujube* (L.) Gaertn. / *Z. mauritiana* Lam.]
 286. *Calotropis gigantea* Br.
 287. *Wrightia antidysenterica* [probably *Alstonia spectabilis* R.Br.]
 288. *Grislea tomentosa* Roxb. (*Woodfordia* Andr.) (*Lythrum* Linne)
 [= *Woodfordia floribunda* Salisb.] 521
 289. *Amyris aculeata* 522
 290. *Lawsonia spinosa* Linn. [= *Lawsonia spinosa* L.] 525
 291. Sapindi? *Arbuscula* 12-16 pedata, folia pinnata. Capsule elongata siliquiformis, 1-locularis, 3-valvis polyforma. Sem. [unreadable] 3-alata as in *Paullinia*.
 292. *Cathartocarpus Fistula* [*Cassia fistula* L.]
 293. *Cathartocarpus javanica* [possibly *Cassia javanica* L.]
 294. *Caesalpinia alata* [probably not *Caesalpinia* sp.]
 295. *Gartnera racemosa?* (Banisterioides)

296. *Crateva* sp. 7 fruit, arbuscula, folia ternata
297. *Vitex latifolia* Lamarck [= *Vitex parviflora* Juss.]..... 526
298. *Passiflora* sp. folia quinquepartita (plant dead)
299. *Hibiscus* sp. narrow pentagonal capsule (dead) [probably *Hibiscus hirtus* L.]
300. *Erythrina* *Coralloidendron* or *indica*? (flowering plant not seen)
301. *Stizolobium pruriens* Persoon [= *Mucuna pruriens* (L.) DC.]
302. *Flemingia strobilifera* Brown in H. K. vol. 4 [= *Flemingia strobilifera* (L.) R.Br.]
303. *Aristolochia indica* (a few seeds)
304. *Sterculia* sp. distinct from *S. macrophyllum* of Vent., a native of Java
[= *Sterculia populifolia* DC.]..... 528
305. *Cucurbita* sp. a dry Gourd, frequent in thicket
306. *Phyllanthoides baccata* allied to *Flueggia* of Willd. (*Cluytia*?) [= *Phyllanthus* sp.]
307. *Inga* sp., an aculeated tall Shrub, frequent on the Hills [probably not *Inga*]
308. *Acacia* sp., a thorny tall plant, leaves pinnated [= *Vachellia farnesiana* (L.) Wight & Arn.]
309. Frutex folia glabra, bacca 3-sperma, seminibus compressis
310. *Gentianeae*? a tall slender plant, dead. Rocky Hills, Coepang
311. *Octandria Tetragnia*, Caps 5-locularis polysperma

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References

- Aiton, W.T. (1810–1813). *Hortus Kewensis*, 2nd edn. (Longman, Hurst, Rees, Orme & Brown: London.)
- Brown, R. (1810). *Prodromus Florae Novae Hollandiae*. (J.J. Johnson & Co.: London.)
- Cunningham, A. (1836). Letter, A. Cunningham to Lindley, 6 October 1836: *Letters to Lindley A–K*, f. 180. Archives, Royal Botanic Gardens, Kew: London.
- Heward, R. (1862). Collections made by Allan Cunningham 1817 to 1830 [List of specimens donated to Kew, dated 3/11/62]. *Kew Collectors via Cunningham KCL8/4*, f. 179. Archives, Royal Botanic Gardens Kew: London.
- Labillardiere, J.J.H. de (1804–1806). *Novae Hollandiae Plantarum Specimen*. (Dominae Huzard: Paris.)
- Mabberley, D.J. (2004). The Botanical Magazine and George Bond's drawings of Allan Cunningham's Australian plants. *Curtis's Botanical Magazine* 17(4): 226–235.

Persoon, C.H. (1805–1807). *Synopsis Plantarum*. (C.F. Cramerum: Paris & J.G. Cottam: Tubingen.)

Ridley, H.N., Britten, J. & Fawcett, W. (1885). Prodrromus Flora Timorensis. *In*: H.O. Forbes, *A Naturalist's wanderings in the eastern archipelago*. pp. 497–523. (Sampson Low, Marston, Searle & Rivington: London.)